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Patent claims

1. A method for controlling a production unit with at least one primary drive (master drive 11) and at least one dependent drive (20-22) whose movement depends directly or indirectly on the movement of a master shaft of the master drive (11), characterized in that the dependent drive (20-22) is in each case assigned a servo actuator (23-25), in that the servo actuator (23-25) determines, from an input signal, a desired value (29) for the dependent drive (20-22) and conveys this desired value (29) to the dependent drive (20-22), and in that, when determining the desired value (29), account is taken of a limit value (33) stored in particular in the servo actuator (23-25).

2. The method as set forth in the preamble of claim 1, characterized in that the dependent drive (20-22) is in each case assigned a transducer (26-28), in that a movement of the dependent drive (20-22) is detected by the transducer (26-28) and is transmitted as actual value (30) to a comparator (31), and in that the comparator (31) compares the actual value (30) with a limit value (33) stored in particular in the servo actuator (23-25) and, in the event of a deviation, generates a stop signal (38).

3. The method as set forth in the preamble of claim 1, characterized in that the dependent drive (20-22) is in each case assigned a servo actuator (23-25) and a transducer (26-28), in that the servo actuator (23-25) determines, from an input signal, a desired value (29) for the dependent drive (20-22) and conveys this desired value (29) to the dependent drive (20-22) and to a comparator (31),

in that a movement of the dependent drive is detected by the transducer (26-28) and is transmitted as actual value (30) to the comparator (31), and in that the comparator (31) compares the desired value (29) with the actual value (30) and, in the event of a deviation, generates a stop signal (38).

4. The method as set forth in the preamble of claim 1, characterized in that the dependent drive (20-22) is in each case assigned a servo actuator (23-25) and a transducer (26-28), in that the servo actuator (23-25) determines, from an input signal, a desired value (29) for the dependent drive (20-22) and conveys this desired value (29) to the dependent drive (20-22) and to a comparator (31), in that, when determining the desired value (29), account is taken of a limit value (33) stored in particular in the servo actuator (23-25), in that a movement of the dependent drive is detected by the transducer (26-28) and is transmitted as actual value (30) to the comparator (31), and in that the comparator (31) compares the actual value (30) with a limit value (33) stored in particular in the servo actuator (23-25) and/or with the desired value (29), and, in the event of a deviation, generates a stop signal (38).

5. The method as claimed in claim 1, 3 or 4, characterized in that the input signal of the servo actuator (23-25) is information with regard to a speed of rotation or an angle of rotation of the master shaft (master shaft default 34).

6. The method as claimed in claim 2, 3 or 4, characterized in that the desired value (29) is stored in a memory (32) of the comparator (31) as synchronous value (37), and in that the comparison

with the actual value (30) relates to the stored synchronous value (37).

7. The method as claimed in one of the preceding claims, characterized in that each dependent drive (20-22) has its own synchronous value (37) and/or its own limit value (33) stored in the comparator (31).

8. The method as claimed in one of the preceding claims, characterized in that the master drive (11) is assigned its own servo actuator (master shaft servo 42) and its own transducer (master shaft transducer 41), in that, from an input signal (43) of the master shaft servo (42), a default (master shaft default 34) for the master drive (11) is determined and is delivered to the comparator (31) for the master drive (11), and in that the comparator (31) compares an actual value (30), detected by the master shaft transducer (41), with a limit value (33) stored in particular in the servo actuator (23-25) and/or with the master shaft default (34) and, in the event of a deviation, generates a stop signal (38).

9. The method as claimed in claim 8, characterized in that, when determining the master shaft default (34), account is taken of a limit value (33) stored in the master shaft servo (42).

10. The method as claimed in claim 8 or 9, characterized in that the master shaft default (34) is delivered to an input of the servo actuator (23-25) of the dependent drive (20-22).

11. The method as claimed in one or more of the preceding claims, characterized in that a hood signal (40) is delivered to the servo actuator (23-25) and if appropriate also to the master

shaft servo (42) and/or to the comparator (31), which hood signal (40) is triggered when access is made into the production installation, and in that, in the presence of a hood signal (40), the limit value (33) in the servo actuator (23-25) and/or in the comparator (31), if appropriate also a master shaft limit value (45), in the master shaft servo (42), is reduced.

12. The method as claimed in one or more of claims 2 through 11, characterized in that the input signal of the servo actuator (23-25), in particular the master shaft default (34), is delivered to the comparator (31), and in that the limit value (33) is set to or kept at zero as long as the input signal or master shaft default (34) has the value zero.

13. A device for controlling a production unit with at least one primary drive (master drive 11) and at least one dependent drive (20-22) whose movement depends directly or indirectly on a movement of a master shaft of the master drive (11), characterized in that the dependent drive (20-22) is in each case assigned a servo actuator (23-25), in that the servo actuator (23-25) can determine, from an input signal, a desired value (29) for the dependent drive (20-22) and can deliver this desired value (29) to the dependent drive (20-22), and in that the desired value (29) is limited by a limit value (33) stored in particular in the servo actuator (23-25).

14. The device as set forth in the preamble of claim 13, characterized in that the dependent drive (20-22) is in each case assigned a transducer (26-28), in that a movement of the dependent drive (20-22) can be detected by the transducer (26-28) and can be transmitted as actual value (30) to a

comparator (31), and in that the comparator (31) is provided for comparing the actual value (30) with a limit value (33) stored in particular in the servo actuator (23-25) and for generating a stop signal (38) in the event of a deviation.

15. The device as set forth in the preamble of claim 13, characterized in that the dependent drive (20-22) is in each case assigned a servo actuator (23-25) and a transducer (26-28), in that the servo actuator (23-25) can determine, from an input signal, a desired value (29) for the dependent drive (20-22) and can deliver this desired value (29) to the dependent drive (20-22) and to a comparator (31), in that a movement of the dependent drive (20-22) can be detected by the transducer (26-28) and can be transmitted as actual value (30) to the comparator (31), and in that the comparator (31) is provided for comparing the actual value (30) with the desired value (29) and for generating a stop signal (38) in the event of a deviation.

16. The device as set forth in the preamble of claim 13, characterized in that the dependent drive (20-22) is in each case assigned a servo actuator (23-25) and a transducer (26-28), in that the servo actuator (23-25) can determine, from an input signal, a desired value (29) for the dependent drive (20-22) and can deliver this desired value (29) to the dependent drive (20-22) and to a comparator (31), in that the desired value (29) is limited by a limit value (33) stored in particular in the servo actuator (23-25), in that a movement of the dependent drive (20-22) can be detected by the transducer (26-28) and can be transmitted as actual value (30) to the comparator (31), and in that the comparator (31) is provided for comparing the actual value (30) with a limit value (33)

stored in particular in the servo actuator (23-25) and/or with the desired value (29) and for generating a stop signal (38) in the event of a deviation.

17. The device as claimed in claim 13, 15 or 16, characterized in that the input signal is information with regard to a speed of rotation or an angle of rotation of the master shaft (master shaft default 34).

18. The device as claimed in claim 14, 15 or 16, characterized in that the actual value (30) can be stored in a memory (32) of the comparator (31) as synchronous value (37), and in that the comparison with the actual value relates to the stored synchronous value (37).

19. The device as claimed in one of claims 13 through 18, characterized in that each dependent drive (20-22) can have its own synchronous value (37) and/or its own limit value (33) stored in the comparator (31).

20. The device as claimed in one of claims 13 through 19, characterized in that the master drive (11) is assigned its own servo actuator (master shaft servo 42) and its own transducer (master shaft transducer 41), in that, from an input signal (43) of the master shaft servo (42), a default (master shaft default 34) for the master drive (11) can be determined and can be delivered to the comparator (31) for the master drive (11), and in that the comparator (31) is provided for comparing an actual value (30) of the master drive (11), detectable by the master shaft transducer (41), with a limit value (33) which can be stored in particular in the servo actuator (23-25) and/or with the master shaft default (34) and for

generating a stop signal (38) in the event of a deviation.

21. The device as claimed in claim 20, characterized in that the master shaft default (34) is limited by a limit value (33) stored in the master shaft servo (42).

22. The device as claimed in claim 20 or 21, characterized in that the master shaft default (34) can be delivered to an input of the servo actuator (23-25) of the dependent drive (20-22).

23. The device as claimed in one or more of the preceding claims, characterized in that a hood signal (40) can be delivered to the servo actuator (23-25) and if appropriate also to the master shaft servo (42) and/or to the comparator (31), which hood signal (40) can be triggered when access is made into the production installation, and in that, as a function of a status of the hood signal (40), the limit value (33) in the servo actuator (23-25) and/or in the comparator (31), if appropriate also a master shaft limit value (45) in the master shaft servo (42), can be reduced.